ABSTRACT

A novel construction board composition is disclosed comprising a unique combination of synthetic binders selected for their ability to establish a strengthened permanent bond in the final dry state for use in a construction board composition comprising primarily gypsum, and in a construction board composition comprising an expanded mineral such as Perlite which largely reduces the amount of gypsum over current gypsum construction board formulations, thus reducing the weight while maintaining the strength of the construction board structure. In a preferred embodiment, the lightweight, strengthened gypsum construction board of the present invention also comprises an optional covering veneer that is applied to provide increased strength, moisture resistance, and fire retardency, and the back paper top ply is treated to provide increased flexural strength.